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ABSTRACT

In the first of five papers from the American Association of Community and Junior Colleges and the American Vocational Association joint study on vocational education articulation, David Bushnell describes the study as a whole, and its methods of identifying exemplary programs. William Pedderson and William Loch outline the articulation program at Williamsport (Pennsylvania) Area Community College, which serves a largely rural area. Program success is attributed to the cooperation and coordination between faculties of secondary and post-secondary vocational programs, and strong administrative leadership. Jan Nugent describes five facets of the Milwaukee Area Technical College program: internal articulation, articulation with other institutions, advisory committees, attention to urban mission, and short-term industrial training programs. Kenneth Smith reviews articulation between the Board of Cooperative Educational Services of Hamilton-Fulton and Montgomery Counties (New York) and Fulton-Montgomery Community College which involved cooperative data processing, an enrichment center, graduate studies program, technical programs, and adult education. Margot Eddy describes suburban Bellevue (Washington) Community College's cooperation with 10 public school districts, two vocational-technical institutes, and three community colleges. (MB)

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ARTICULATING VOCATIONAL EDUCATION AT THE POST-SECONDARY LEVEL:

PAPERS FROM THE AACJC/AVA JOINT STUDY

Including:

Confusion on the Bridge: Articulating Vocational Education at the Post-Secondary Level

by David S. Bushnell
Project Director
AACJC/AVA Joint Study

A Case Study in Successful Articulation: Williamsport Area Community College, Williamsport, Penn.

by William Fedderson and
William Loch

A Case Study in Successful Articulation: Milwaukee Area Technical College

by Jan Nugent

A Description of Cooperative Articulation Between the Board of Cooperative Educational Services Hamilton-Fulton and Montgomery Counties and the Fulton-Montgomery Community College, Johnston, N.Y.

by Kenneth A. Smith
District Superintendent of Schools
Hamilton-Fulton and Montgomery Counties

Bellevue Community College: A Suburban Curriculum Articulation Model

by Margot Sanders Eddy

JC 780 511

CONFUSION ON THE BRIDGE:

ARTICULATING VOCATIONAL EDUCATION AT THE POST-SECONDARY LEVEL

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David S. Bushnell
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Articulating Vocational Education at the Post-Secondary Level

Since World War II, U.S. industry has leaned more and more heavily upon the nation's public educational institutions for the training of its workers. Partly in recognition of the outstanding contribution that the nation's vocational and technical schools made to the war effort and partly because of the growing cost of vocational education, the business and industrial community have supported an expanded program of vocational education. Given this climate of support, enrollments in vocational education have grown sixfold since 1947 with the growth in post-secondary technical education programs leading the way. Prior to World War II, most technical education programs were located in private trade and technical schools, hospitals, and vocational institutes. Even today, fully accredited proprietary and not-for-profit private institutions outnumber public institutions by a 4 to 1 margin. Yet they enroll less than a third of those now participating in some form of post-secondary vocational training.

The rise in enrollments and the exponential growth in numbers of public institutions -- community colleges, area vocational schools, technical institutes -- can in part be attributed to the passage during the last two decades of several important pieces of federal legislation authorizing the investment of billions of dollars in facilities and operating costs. Between 1965 and 1974 alone, $18.3 billion were spent on vocational education. The Vocational Education Amendments of 1968, the Higher Education Act of 1972 and the Educational Amendments of 1976, while authorizing increased expenditures of federal dollars, also emphasized the importance of collaborative planning in the achievement of

short and long term vocational education goals. In spite of this emphasis, however, vocational education programming, not unlike the rest of education, has yet to achieve articulation among institutions at the local level offering vocational-technical education programs. This lack of coordination among secondary schools and between community colleges and secondary schools has in some states led state legislators to demand that better coordination be brought about--or else. Even Congress expressed its concern by mandating that an elaborate planning procedure be adopted by states when developing their one and five year plans for vocational education.

With increasing competition for the educational tax dollar and political pressure on state legislators and Congress to support an expanded array of public services, a number of local educational institutions are exploring ways of cutting costs through cooperating with other institutions in their service areas. Where such efforts have been successful, the various education and training resources of the community are more likely to be effectively utilized. Fortunately, the beneficiaries are likely to be both full and part-time students who would benefit through greater freedom to choose among course offerings without loss of credit.

When educators undertake to build better bridges between institutions, and many have, they often get concerned with the mechanics of coordination rather than with the problems that give rise to competition and duplication of programs. Formal articulation agreements are hammered out. Joint planning committees are formed. Procedures for transferring credits are

agreed upon. While these actions often are essential elements in bringing about needed reforms, they do not, in and of themselves, correct the basic root problem, namely, the absence of effective interpersonal relationships. Defining articulation as the effort of educators at the local level to "discover, establish and continually improve relationships between policies, plans, procedures, programs and people,"[1] any attempt to improve articulation without first focusing on "people" will be unproductive. Without the dedication of people in leadership positions and their willingness to communicate and to build mutual trust, articulation will not be achieved.

Openness and trust, two terms which have long symbolized effective interpersonal relationships, are difficult to achieve when one's self-interest or that of one's organization is at stake. No matter what arena articulation is expected to be achieved in--between secondary and post-secondary institutions, among area vocational centers, vocational-technical schools, and community colleges, between education and work, and work and education, between two and four year colleges, and among local, state, and federal programs--the common denominator, that which dictates success or failure, is the quality of interpersonal relationships. Successful collaboration and communication requires people who are willing to make the effort necessary to understand each other's value positions, to share information, and to support programs that transcend individual or organization interests in favor of the public good.

During the last presidential campaign, the Public Agenda Foundation, a nonprofit, nonpartisan organization established to identify critical public issues and to develop alternative approaches for dealing with these issues, surveyed opinion leaders and found that the dominant concern

in America was the trend "Toward a psychology of self-interest so all-embracing that no room is left for commitment to national and community interests... . That in the pursuit of their organizational goals, the politicians and the businessmen, and the unions and the professions have lost sight of any larger obligation to the public and are indifferent, or worse, to anything that does not benefit--immediately and directly--themselves or their institutions."[2] How to recapture or rekindle this spirit of community that permeated the colonial settlements two hundred years ago became the major thrust of the Public Agenda Foundation as it attempted to spark the interest of the principal presidential contenders in the issue. It is this same area of tows that became the concern of a study launched over a year ago to explore the advantages associated with successful articulation of post-secondary occupational programs in the local community.

AACJC/AVA Joint Study

In December, 1976, the American Association of Community and Junior Colleges (AACJC) and the American Vocational Association (AVA), with USOE financial backing, undertook a study of administrative policies and practices at the local level which have resulted in exemplary programs of coordination and cooperation between public and private institutions providing post-secondary non-baccalaureate occupational and vocational education. In the interest of serving as many youths and adults as possible in a given community at the lowest possible cost, the study concentrated on and will report the findings from a nationwide survey designed to pinpoint those policies and administrative practices that facilitate or impede

cooperation among community colleges, post-secondary area vocational schools, proprietary schools, and other institutions or agencies concerned with vocational education. Representatives of various community training institutions were interviewed and case studies developed.

The objectives of the study were to:

1. Identify policies and procedures that facilitate or impede cooperation.

2. Develop recommendations for consideration at the federal, state, and local levels that would promote cooperative working relationships.

3. Disseminate widely the findings and recommendations of the study through a series of regional conferences, reports, articles and a national conference.

4. Establish a mechanism to continue cooperation between AACJC and AVA.

The Joint Study team began its work in January by convening a national advisory committee whose deliberations gave rise to a set of criteria to be used for the purpose of identifying successful cooperative efforts. Nominations of locations having exemplary programs were then solicited by mail from state directors of community colleges, state directors of vocational education, and from executive secretaries of state vocational advisory committees. The following practices were suggested as selection criteria;

1. The existence of formal or informal agreements between two or more local institutions stating how such institutions should collatorate in their efforts to provide support for post-secondary vocational education.

2. The use of criterion referenced tests or other systematic assessment procedures making it possible to offer course credit to students and adults who have already acquired specific knowledge and skills in a given vocation.

3. Closely related to giving credit for already acquired knowledge and skills is the willingness of local institutions to accept the transfer of credits from another institution.

4. The use of follow-up surveys to ascertain how well students in those occupations for which they have been trained are doing.

5. The existence of joint planning committees and joint membership in advisory committees.

6. The provision of individual study opportunities and flexibly scheduled courses giving students access to programs when convenient for them.

7. The joint sponsorship of community need surveys.

8. Procedures whereby key staff are provided release time to participate in joint planning sessions.

9. Shared counseling and job placement programs.

10. Budget and program planning procedures giving key administrators the opportunity to review each other's budget requests.

By June 30, 1977, 140 site nominations had been received from all regions of the nation. A twenty percent non-random stratified sample of the nominated sites was then selected for detailed analysis. The twenty-two sites selected were purposely chosen to yield a good regional mix of sites and to provide for the distribution of 11 other variables which were hypothesized to influence the articulation process within a given area. These articulation variables were: 1) type of community; 2) size of community; 3) size of institution; 4) age of institution; 5) local governance structure; 6) state governance structure; 7) type of state board organization; 8) source of financial support; 9) percent of area taxes devoted to education; 10) community average annual per capita income; and 11) growth rate of region. Care was taken to insure that the purposeful sample of twenty-two sites were not only representative of the country's geographical regions but constituted a satisfactory mix of other relevant variables.

The data-collection phase of the study has just recently been completed. Two-person site visitation teams conducted interviews with

institutional representatives (administrators, faculty, students and community leaders) for the purpose of documenting the extent of articulation among institutions in a given community. Based upon these initial interviews and the analysis of the socio-economic data, nine or so exemplary models will be selected for more intensive study. Reporting the findings and the series of case studies will then become the basis for five regional conferences and a national conference scheduled for the Fall and early Winter (1977-78).[3] Each regional conference will generate a set of recommendations for consideration at the national conference.

Tentative Findings

Having just completed over two hundred interviews in 22 communities in as many different states, it is a bit risky to attempt at this early stage to arrive at any valid generalizations. Why many of the communities chosen for site visitation have succeeded where others have failed can be attributed to a number of important variables--leadership, level of local funding, economic climate, and clarity of purpose. Among the reasons supporting a growing interest in articulation are:

-- An increasing concern with the improvement of program quality. Earlier efforts directed toward simply responding to the demand for new programs are now being turned to exploring ways in which better program quality can be achieved.

-- Shrinking enrollments at the secondary school level. High schools (and their closely related adult schools) are aggressively marketing their programs to adults to replace lost revenues.

-- Increasing costs. The current demand for accountability and improved efficiency reflects the public's (and their political representative's) concern that educators are feathering their own nests at the expense of the taxpayer.

-- Competency-based instruction. Paralleling the concern with rising cost is the growing recognition that there ought to be better ways of assessing a student's competency, thereby shortening the time required to reach a prescribed level of performance.

Tensions between community colleges and area vocational-technical centers have been mounting recently as the debate rages around who should and could most effectively teach job skills. Area vocational schools complain that community colleges require their students to enroll in unneeded courses in order to qualify for the A.A.S. degree. Community college spokesmen, on the other hand, argue that students need more than entry level job skills to qualify for and advance in not one but multiple careers. The debate, of course, is reminiscent of the classic argument between Charles Prosser and John Dewey after the turn of the century when federal support for vocational education was initially being justified on the grounds that local school districts were not meeting the manpower needs os private industry. Ironically, the flow of federal dollars to vocational education which began in 1917 may well have exacerbated (particularly during the last 12 years) the dilemma of an over-built, often fragmented educational delivery system.

While many institutions are carefully weighing enrollment projections and trying to meet new program demands through articulation agreements with other institutions, there are barriers which need to be recognized and overcome before successful collaboration can be achieved. For the purpose of discussion, I would like to suggest four groupings of barriers, each depicting a different set of forces blocking successful articulation.

The first reflects the impact of government controls and other forces external to education on local institutions. Program approval and coordination of post-secondary education at the state level has

become a nightmare of claims and counterclaims in many states. The impact that the Higher Education Act of 1972 had on state governance structures could be hardly described as salutary. Before 1972, most state governance structures fell into one of three categories; those with a single state board of education; those with separate boards of education for elementary, secondary and vocational education and a board for higher education; and those that had three separate boards, one overseeing elementary and secondary education, the second vocational-technical institutions, and the third higher education. Since that time, however, confusion reigns. According to T. Harry McKinney,[4] 19 states have elected to adopt the option of designating existing state agencies as state commissions (for the purpose of meeting requirements in Section 1202), 16 states plus 3 territories have chosen the option of creating new commissions, and 11 states plus 2 territories have chosen the option of augmenting existing state agencies as state commissions. The result---growing involvement of various state agencies in the planning and approval of post-secondary vocational programs.

In addition to the controls and requirements imposed by various state departments, local institutions are subject to pressure from employers and unions, accreditation commissions, professional organizations such as the League of Nursing, and other well meaning groups whose special concerns often hinder the efficiency and responsiveness of the local institutions.

As a means of coping with these external pressures, a number of suggestions need to be carefully weighed and evaluated. Let me suggest for your consideration the following:

1. Consider statutory legislation designed to clarify state governance patterns.

2. Endorse the development of a common data base which permits comparison of "the output" of students from area vocational schools, technical institutes, community colleges, branch colleges, and four year institutions now offering two year degrees.

3. Revise and update funding formulas now almost universally dependent upon enrollment as the principle strategy for allocating funds. The high cost of vocational education and the growing numbers of the non-traditional students enrolled make current funding formulas obsolete.

A second set of barriers which I will label inter-institutional in nature are those that are the result of the stereotyped perceptions of people in institutional settings by their counterparts in different institutions. It is probably sufficient to simply observe that faculty and administrators reared in one tradition will view with skepticism and outright hostility the goals and actions of others reared in a different tradition. Add to this a tendency to rationalize the activities of ones own institution and you begin to get a notion of how difficult it is to build effective bridges between two or more institutions at the local level.

A further divisive issue arises when these same institutions discover that they are competing for the same student. The fall-off in the traditionally aged post-secondary enrollee mentioned earlier have forced the institutions serving this population to expand their marking effort to involve new target groups. A recent study by the North Central Accreditation Association points up the fact that existing post-secondary vocational education institutions are moving toward a common denominator of services, including counseling and guidance, remedial or developmental programs, adult continuing and basic education, as well as the vocational and academic training.[5] This convergence of programs and services further confuses the potential enrollee in terms of where he or she might find

appropriate educational opportunities. Rather than each institution duplicating each others programs and services, consideration needs to be given to a cooperative effort.

Among the various remedies for duplication of effort are such suggestions as adopting a competency based educational format, expanding credit for life experience, providing ways of screening for advanced placement, and providing opportunities for joint enrollment. The models which our study has identified should serve as useful reference points for anyone seeking guidance in this area.

A third cluster of problems associated with breaking down the barriers to successful articulation can be described as a breakdown in communication. Failure to develop a means of classifying programs on a statewide basis prevents a systematic inventory of programs. The failure of curriculum planners to understand or appreciate what sequence of skills and job training activities are being offered often leads to duplication of course requirements. Teachers in area vocational schools find it difficult to charge time to collaborative planning because they are expected to spend that time in the classroom teaching. Faculty members at community colleges, on the other hand, enjoy a greater degree of freedom in determining how they can or should spend their time.

Another barrier, one that has been nourished through the imposition of a separate teacher training system for vocational education, reflects the requirement that vocational teachers be trained in a vocationally certified or approved manner. Teachers trained and recruited in this way travel a different route than the typical faculty member employed in a community college. The differences in both prior experience and training are reflected in their role perceptions and modes of operation.

Turning to our last cluster of barriers, there are a number of pedagogical problems which keep vocational schools and community colleges apart. The first is concerned with adequately differentiating a degree program from that of a certificate or a diploma program. Can we identify those learning experiences which differentiate between the two levels of achievement?

The second is the concern with determining how best to prepare students for work. What constitutes a meaningful response to changing employer needs and to the career interests of potential employees? In other words, what assurances does the vocational student have that what he or she is receiving in the way of training will after all be job relevant? As a brief aside, let me cite a recent study by a behaviorial science firm here in Boston.[6] George Klemp, at a conference on relating education and work, made the observation that "the amount of knowledge one acquires of a content area is generally unrelated to superior performance in an occupation and is often unrelated even to marginally acceptable performance." Klemp goes on to argue that cognitive skills developed in the process of acquiring and using knowledge constitute an important element in the determination of occupational success. The ability to synthesis information, to understand many sides of a controversial issue, and the ability to learn from experience, these are the essential elements of cognition. In addition, Klemp found that successful performers in a variety of occupations must also evidence interpersonal skills and a high degree of motivation. Such attributes can be taught, he concludes, given present day knowledge of group dynamics and competency based instructional programs. By concentrating on the development of problem solving, social, and communication skills, post-secondary institutions, he argues, can successfully prepare their students for work.

With these issues go the current debate on survival skills versus vocational skills. Should a graduate be expected to have a broader array of problem solving skills which enable him to make choices and to advance in his chosen career or should they be pretty much confined to the development of entry level job skills?

It is expected that this study will allow us to identify those practices and procedures that lead to successful articulation among institutions engaged in vocational education. Hopefully each of the exemplary models identified will be used as guidelines by institutions seeking to enter into various types of articulation agreements. Congress and state legislatures may also find the results useful as they contemplate amendments to existing legislation. Last but by no means least, millions of full and part-time students now enrolled in community college occupational education programs and in post-secondary area vocational schools will be better served, often at less cost, through the fostering of cooperative relationships at the local level.

Footnotes and References

1. John W. Porter, Planning for Continuous Occupational Education Programs Between Secondary and Postsecondary Education, Lansing, Michigan: Michigan Department of Education, 1975, pg. 1.

2. Daniel Yankelovich, Moral Leadership in Government. New York, New York: Public Agenda Foundation, September 1976, pg. 13.

3. The locations and dates of the regional conferences are:

a. Milwaukee, Wisconsin	November 9 - 10
b. Portland, Oregon	November 21 - 22
c. Boston, Massachusetts	December 14 - 15
d. Las Vegas, Nevada	January 11 - 12
e. Atlanta, Georgia	January 18 - 19

   The national conference is scheduled to be held in Washington, D.C. on February 23 & 24.

4. T. Harry McKinney, "Section 1202 State Commissions: Patterns of Development and Related Concerns," paper presented at the meeting of Executive Officers of Section 1202 State Commission at Arizona State University, April 10, 1975.

5. Task Force Report of the Council of National Central Community Junior Colleges, North Central Association of Colleges and Schools, December, 1977.

6. George O. Klemp, Jr. "Three Factors for Success," in Dyckman W. Vermilye, ed. Relating Work and Education: Current Issues in Higher Education, 1977. San Francisco, California: Jossey Bass Publishers, page 103.

AACJC/AVA Joint Study
December 12, 1977

William Fedderson
William Loch

MAR 2 0 1978

A Case Study in Successful Articulation: Williamsport Area Community College Williamsport, Pennsylvania

Williamsport, Pennsylvania, is probably best known for two of its institutions: Grit, the national weekly that long has been a staple in the literary diet of small-town and rural America--and Little League baseball, which is headquartered in the town.

Less widely know is that it is the site of Williamsport Area Community College, a community based post-secondary educational institution which has been markedly successful in articulating and coordinating its vocational education programs with those of other private and public schools and colleges in its area. That is why it was chosen as a subject for examination in the national Joint Study project of the American Association of Community and Junior Colleges and the American Vocational Association. The college's plan-of-operation should serve as a model for other institutions.

Economic Climate

The Williamsport Area Community College (WACC) serves a 10-county region in north-central Pennsylvania with a population of more than 440,000. While it is largely rural--with wooded mountains, foothills and rolling farmland--the area served encompasses important industrial and business centers. Chief among the urban centers is the city of Williamsport itself, on the banks of the west branch of the Susquehanna River which winds through the region on its way to the Chesapeake Bay.

Spread over an area that reaches from the center of the commonwealth to the New York State line, the region is geographically larger than New Jersey. Its population is sparsely distributed in the northern section while more heavily concentrated in the south-central area near Williamsport.

Minorities constitute less than two percent of the region's residents.

Surrounded by Allegheny foothills, the city of Williamsport is the center of a community of diversified industries and businesses on the banks of the Susquehanna. The economy has been relatively stable in recent times, with a slow but steady growth in population and employment projected to continue through the next few years. The latest figures estimate unemployment at six percent. A century ago Williamsport was called the timber-cutting capital of the world. Lumber magnates built many of the fine Victorian homes that still dominate the city's older residential sections.

The timber industry declined sharply before World War I but remains an important part of the region's economic life. Conservation measures taken over the years have helped to restore the forests. Programs related to this indigenous industry comprise an important part of the college's curriculum. In fact WACC is the only educational institution in the state, except for Pennsylvania State University, to offer a forestry study program.

Agriculture also contributes importantly to the robust economic climate. Dairy farming represents the most important agricultural endeavor, but there is considerable activity in feed grain cultivation and vegetable production. Accordingly, WACC offers comprehensive study programs in horticulture.

Williamsport proper has a population approaching 40,000 and that figure doubles when residents of the larger metropolitan area are counted. Long noted for its fine homes, it has in recent years been affected by the tight housing market along with most of the rest of the nation. City, county and business interests are supporting efforts to increase low and middle income home building.

The area's industries manufacture and market such widely varied products as metal fabrications, airplane engines, electronic components, wire rope, textiles and footwear. Small business also helps to support

a diverse and thriving economic community. And what goes on at the economic level has a profound influence on the scope of the Williamsport Area Community College program.

As an aid to program planning, WACC prepared a regional profile which projects the continuation of strong employment trends among most of the basic industrial groups for the forseeable future. Agricultural and mining occupations are expected to slip sharply in the immediate future, although the rich anthracite coal deposits in the southern sector of the region could be the source of revived mining activity should the nation's energy search be channeled in that direction.

The College and Its Roots

This, then, is the geographic and economic backdrop for Williamsport Area Community College. The city is the economic center of the 10 counties served by the college. The college also maintains special facilities at the Williamsport-Lycoming county airport for aviation technical training, and at Allenwood, 10 miles away, for forestry and other earth science courses.

WACC formally opened for classes in September, 1965 following passage of the Pennsylvania Community College Act of 1963. However, the institution traces its beginnings to 1914 when a small industrial arts shop, constituting a vocational program, was opened at Williamsport High School. An adult day school, established in 1920, was merged at the beginning of World War II with the high school vocational program to form the Williamsport Technical School. The technical school eventually became the community college.

The technical institute had gained an international reputation as an outstanding vocational center by 1953, when it was officially approved to train foreign students. Many foreign educators enrolled to study the methods used to teach vocational education, with the information they

obtained to be used as a guide for establishing similar centers in their own countries. Today, some 55 percent of the students enrolled in the institute's successor, WACC, come from other parts of Pennsylvania, other states and some foreign countries. Forty-five percent of WACC's students come from the 10 counties of its region. Ninety-five percent of the college's students are in career oriented programs. A total of 3,240 students are enrolled in day programs, and 3,800 in evening programs. Enrollments include many part-time students. The enrollment of this latter category of student has grown the fastest in recent years.

WACC offers associate degrees or certificates to students who successfully complete two-year programs of study, and certificates of completion for those who finish specific study programs of shorter duration. The college has a foreign studies program which is available to a limited number of students for international living, work and study projects. Credit can be obtained or work can be taken on a non-credit basis.

The college offers developmental studies for students, young and old, who lack academic skills. And it offers a comprehensive list of freshman and sophomore academic courses for those persons whose objectives are to go on to four-year colleges and universities.

Although a relatively small percentage of WACC students enter transfer programs, there are those who do find a number of reputable institutions within convenient reach of the Williamsport area. Lycoming College, a four-year private liberal arts college with which WACC has an articulation agreement, is in Williamsport. Pennsylvania State University is only 60 miles distant. Bucknell and Susquehanna Universities, private institutions, and the state colleges of Mansfield, Bloomsburg and Lock Haven are within commuting distance.

Cooperative Arrangements

In addition to its post-secondary instructional program, WACC maintains a vocational program geared to the secondary instructional level. The arrangement is the only one of its kind in Pennsylvania. This is the result of a fortunate and rewarding cooperative connection with the local school districts. The college provides the vocational study for 17 high schools in the area, which sponsor the program. Thus, Williamsport Area Community College is the only community college in Pennsylvania that combines both secondary and and post-secondary services for its district.

Pennsylvania school districts are required by law to offer vocational programs. The 17 local high schools are fulfilling this requirement by contracting with WACC to provide the vocational training. Students are bused to WACC daily during nine-week periods which are alternated with nine-week sessions in regular high school classes.

There are a number of advantages accruing to this unique arrangement. The secondary instruction program, for example, provides the students schools with better physical equipment than would be available in restricted local programs. It allows the students to concentrate more fully on the vocational direction they wish to pursue. And the exposure to the college results in greater understanding and appreciation of the programs and opportunities for post-secondary study. WACC's program in secondary vocational education, supported by the school districts, contrasts sharply with the atmosphere of competition that frequently exists in relations between community colleges and local school districts.

Funding for the college's operation is shared by the sponsoring school districts, the state and the student. Twenty of the 38 school districts in the 10-county area sponsor the college and are accountable for providing

more than a third of the total operating budget for WACC. The state of Pennsylvania theoretically supplies one-third of the budget, while the remainder comes from tuitions and fees. However, since 1975, the state has fallen short on its third. Student tuition cannot exceed 1/3; therefore, the school districts must take up the slack.

The preparation of the WACC budget is a two-cycle process: The first part involves the sponsoring districts and the second the state participation.

The first cycle begins in November with the collection of data from division heads through the deans, the president and cost center administrators. The cost center administrators present the justification for their proposed budgets--which are reviewed by the deans and president. A final budget request is then formulated by the chief officers.

The budget request is then reviewed by the budget and finance committee of the WACC board of trustees. It then goes to the Boards of Trustees and superintendents of the sponsoring districts for public consideration in regional budget review meetings. The budget is finally returned to the WACC board for approval (normally by the 1st Monday in March).

The second cycle, revolving around state participation, begins in September for the following fiscal year (this year for '78-'79) with the preparation of data by WACC's fiscal office. A budget prepared by the administrative dean and president is translated into an appropriation request and is presented to the state for consideration along with requests from the other 13 community colleges in the state.

ARTICULATION IMPROVES SERVICE

The college's efforts at articulation are quite successful on the secondary instructional level. It is clear that integration of much of the region's secondary vocational education by the college has resulted in a high degree of articulation between the schools and the college to the end that better service is provided for the community.

At the post-secondary level, cooperation begins with the meetings of various groups representing different levels of administration in the public schools and post-secondary institutions in the area. The first of the groups is the professional advisory committee of superintendents, including officials of the community college's district school systems and the college's dean of secondary instructional services. The college dean is the chairman of the committee, which has as its purpose the exchange of information on the vocational programs. Special attention is given to the effectiveness of the vocational program arrangements.

In addition to the advisory committee, an executive council, composed of selected representatives from school boards of the 20 sponsoring districts, helps to provide direction for articulation. This executive council also recommends persons for membership on the WACC board.

At another level, a group of high school counselors and principals meet monthly with the college staff to review programs and student progress. Eight division directors at WACC meet bi-weekly to exchange information about their programs and coordinate activities.

The heaviest emphasis on coordination is among administrators. However, periodic projects bring together instructors from one discipline or another for articulation purposes. An English professor on the campus will work with all 17 high schools'English Teachers to hammer out an appropriate sequence of study, for example.

Occupational advisory committees perform an important function with regard to identification of community needs. WACC has separate committees in each program area--16 in the secondary and 28 in the post-secondary area. In addition, a committee operates in behalf of the cooperative program. Finally, a professional "blue ribbon" committee oversees all vocational educational offerings at the college. The committee meets at least once every other month.

Under study at the present time is the possibility of using common advisory committees for secondary and post-secondary programs, especially since some members now serve on more than one committee.

There is no evidence that systematic surveys are being conducted to ascertain vocational instruction needs of the community. But there is some informal cooperation with employers. Information is elicited from high school students by their counselors on an occasional basis--and that information is relayed to the college.

However, WACC has a variety of other sources for use in determining which vocational programs to offer. The local Bureau of Employment Security is one such source. Others are state and national manpower projections. The college does try to assess the interests of high school seniors and, of course, it can avail itself of the wisdom of the committees that oversee and advise in the special occupational fields.

To publicize the secondary and post-secondary programs, the WACC admissions officer visits the sponsoring high schools to describe the course offerings. This is a fairly common practice for community colleges. What is perhaps somewhat out of the ordinary, is the use of newspaper and radio spot advertising three times yearly to inform the public about WACC programs. The college provides a capsule summary of information on the college and it publishes catalogues of programs at both levels. The articulation agreement with neighboring Lycoming College includes provisions for students of one institution to take certain courses in the other at no charge. There also is limited teacher exchange.

The college offers a full range of programs designed to give financial aid to students. Of particular interest are the work-study and cooperative education programs. The work-study program offers the student an income-paying job, though not necessarily in the person's chosen occupational field. The cooperative program places the student in a job related to his vocational

studies.

Work-study and cooperative programs are funded from federal and local sources as well as from union apprentice training programs and the Comprehensive Education and Training Act (CETA). CETA programs are designed primarily for unemployed youths and adults who need to spend considerable time, up to a year, in training to acquire skills needed to obtain employment.

An interesting feature of the Williamsport organization is its secondary and post-secondary instructional service cooperative program. It is offered in a variety of occupational fields—including business and computer sciences, transportation, building construction, and earth sciences.

Placement for this cooperative program is arranged so that two students can alternate in a job for nine-week periods. One student attends classes while the other works. Each cooperative instructor is required to develop a set of learning objectives for his students. These objectives guide the instructor and placement officers in the selection of work opportunities. Each division assigns an instructor to serve as coordinator with the employers involved. The coordinator has the responsibility for monitoring the student's progress. Last year the cooperative program placed 32 students. The college hopes to place at least 40 this year.

In addition to the cooperative and closely related work-study programs, there are full-and part-time opportunities for work available for students in need. These are posted in the placement office. Some attempt is made to match student interests with placement opportunities, apparently with limited success.

The secondary instructional services (SIS) cooperative program is offered for high school seniors who are enrolled at the college. The administrator for the program has the responsibility for selecting sites where students can be assigned for work experiences. After assignment, the students are

evaluated periodically by the employers. Each week the student provides the SIS office with his or her work schedule. This work schedule is reviewed every two weeks by the coordinator and the school instructors.

WACC tuition is $295 per semester, with additional laboratory fees of $15 to $60 for students from sponsoring districts. The tuition is $720 for students from non-sponsoring districts or other states.

College officials estimate that 65% to 75% of the institution's students get some form of financial aid. In addition to aid from the work-study, cooperative and apprentice programs, federal funds are available from the Basic Educational Opportunities Grants and Supplemental Educational Opportunities Grants Programs. Pennsylvania also maintains a guaranteed student loan program and a Higher Education Assistance Agency to help students. Some local grants or loans are available, as well as assistance for veterans from the G.I. Bill. Bureau of Vocational Rehabilitation funds are also a source of aid for some students.

DUAL ENROLLMENT

Students may now take courses in two or more institutions in the WACC attendance area at once. Lycoming College and Mansfield State College cooperate in this arrangement. WACC is exploring similar possibilities with Luzerne Community College District, Susquehanna University and Bloomsburg State College. WACC is also studying ways of delivering secondary and post-secondary vocational educational services to the more remote northern tier of counties in the service area.

Williamsport Area Community College offers courses in pre-employment training, supplemental training to employment, and apprenticeship in the fields of plumbing, steam fitting, electrical and construction trades. It also offers on-site, in-service training for trades that require re-licensing

of journeymen.

In most cases WACC grants full credit to students transferring into its classes. Students are evaluated in terms of competencies which are measured by the instructors. Those students not coming out of a Williamsburg area vocational school program are evaluated by a conference of high school and college teachers to determine where they should be placed. Transcripts of course work and achievement are used to track individual students.

Many students receive credits or advance standing because of prior knowledge or skills. Students who come from another area vocational school program or those who offer work or life experience in lieu of formal education may be required to take an examination. In some cases, instructors may determine student eligibility for advanced standing and credit.

The Williamsport Area Community College has negotiated limited contractual links with Lycoming College and Susquehanna University. The contracts provide cross registration procedures with WACC, under which students of any one of the institutions may avail themselves of offerings at any of the others. No money changes hands as long as the exchange is even.

WACC also has a contract with the federal penitentiaries at Lewisburg and Allenwood for instruction it provides in those institutions. The college also may send students to other community colleges for special programs and bill the student's sponsoring district for the fee it pays the other college. In cosmetology, WACC sub-contracts with two private vocational schools to provide full programs.

Curriculum planning for the community college is done by a committee from the geographic region it serves. This committee studies manpower surveys, surveys of student interest and programs of other colleges. Program ideas also are shared with other educational institutions. Outlines of

the discussions and study results are sent to area superintendents, teachers in high schools and the WACC faculty.

The planning process also involves WACC classified employees as well as instructors. On the secondary instructional level, the planning must be guided by procedures set forth by the state bureau of vocational education. New programs must be approved by the state before being offered at the local level.

Credentialing of faculty is flexible. For example, many teachers in the vocational education programs come out of industry with little or no academic experience. They are encouraged, however, to enroll in continuing education programs which will allow them to work toward permanent certificates. Pennsylvania State University also provides some teacher training for vocational instructors. All of the faculty members in the vocational field must pass an occupational competency examination, two hours written and four hours applied, administered by Penn State. Most of the vocational instructors are experienced craftsmen and industrial workers. Considerable weight is given such experience in evaluating effectiveness.

WACC's administrative staff varies somewhat in qualifications at the secondary and post-secondary levels. The SIS administrators often are state certified coordinators and hold master's degrees. Most have met the requirements for supervisory certificates.

At the PSIS level, the key administrators were formerly WACC faculty members. Top administration has a mixed background. The dean for instance, has worked in both four-year and two-year institutions and the president in both secondary and two-year post-secondary institutions.

Salary schedules at WACC are comparable to those in similar colleges in the state. They fall near the median and approximate salaries paid at the high school instructor level.

Evaluation of Success

By most measurements, the Williamsport Area Community College program of articulation is a model for success. Its program works. People of the community are being well served as a result of the efforts of the schools, the college and its sister colleges and local business and industries.

A follow-up survey made each year provides an important barometer of success. For 1975, the survey found that 74 percent of the students who completed programs of study were employed in the fields for which they had trained. Twelve percent were employed in unrelated fields and nine percent went on to higher education. Only four percent were unemployed at the time of the survey.

The surveys are done in May and June and the return rate for questionnaires runs from 75 to 81 percent. The data are sent to the State Department of Education and to high school counselors and division directors. The state also correlates the data with vocational statistics.

To assist graduates in obtaining jobs, the college placement office holds seminars to disseminate employment information. Students are given assistance in writing resumes and in preparing for interviews. The office also prepares transcripts which students can in turn forward to prospective employers, and offers campus facilities to employers for conducting interviews. Some 300 employers within a 100-mile radius have recruited at the college.

A faculty adviser maintains close contact with the student while in college and after graduation. The student is assigned an adviser when he enrolls. In addition, the college has four counselors, two for the secondary program and two for the post-secondary program.

CONTINUING EFFORT

It is evident that the coordination between faculties of the secondary and post-secondary programs at WACC, the leadership of the administration in encouraging such cooperation, and the close communication with the sponsoring districts contribute to successful articulation. Formal articulation agreements significantly provide for transfer of credits. But more important is the continual effort of faculty and administrators to create interpersonal relationships with the students and with leaders of local school systems, business and other secondary and post-secondary institutions.

Articulation has been defined as the effort of educators at the local level to discover, establish and continually improve relationships between policies, plans, procedures, programs and people. Any attempt to improve articulation without first focusing on people problems will be unproductive.

Williamsport Area Community College quite obviously subscribes to that concept and that's why its program works.

AACJC/AVA
Joint Study

Jan Nugent
November 9, 1977

MAR 2 0 1978

A Case Study

in Successful Articulation:

Milwaukee Area Technical College (MATC)

MATC and the Milwaukee Employment Profile

The Milwaukee Area Technical (MATC) has been regarded as a leader in vocational education since its founding in 1912. At that time, it was known as the Central Continuation School. Its students were young workers, 14 to 16 years of age, employed in Milwaukee's factories and shops, required by law to attend school part-time. Very few of these early students finished high school and many had not completed the eighth grade.

Over the intervening years, the college adapted itself to technological and economic change and to the new needs of business, industry and labor. Public pressure raised educational standards, and the student body also changed markedly, along with the institution's name, its programs and funding. But its orientation as the "school for workers" remained constant.

The education of high-school-age youth remains an important part of MATC's services. But the institution also encompasses a high school for adults, college-level academic and technical programs, apprentice training programs, a staggering range of self-development and community outreach activities and two television stations -- WMVS (Channel 10) and WMVT (Channel 36).

Through its 185 organized programs and over 2,300 individual courses, MATC provided educational services to a total of more than 73,000 students in four day centers and 20 evening centers during 1976-77. These students were enrolled, day and evening, either full-or part-time. They ranged from 15 to 80 years of age; they came from other communities in Wisconsin, foreign countries and other parts of the United States.

MATC provides vocational, technical and adult education for:

1. Entry into a career field;
2. Retraining for a new job;

3. Advancement in chosen career fields;

4. Grade school or high school education;

5. One or two years of college education;

6. Apprentice training in cooperation with employers and labor organizations;

7. Personal enrichment.

Until 1969, what is now the Milwaukee campus was supported by the City of Milwaukee. Since that time, the college has entered a new era, an era which encompasses the gradual expansion of services to a metropolitan area, including all of Milwaukee County, most of Ozaukee County and parts of Waukesha and Washington Counties; the district MATC now serves is less than 1,000 square miles in size but embracing a total population of more than one and one-half million.

The district was formed on July 1, 1969 as part of a state system of vocational, technical and adult education authorized by Chapter 292, Wisconsin Laws (1965). The MATC District, composed of all 21 high school districts in the area, is a unique system for delivery of educational services. It includes a large campus in downtown Milwaukee and three smaller specialty campus centers in Oak Creek, Miquon and West Allis.

Milwaukee is the 12th largest city in the United States, but its area technical college is the largest such institution in the nation placing a primary emphasis on occupational education. It may be the largest in the world. Its future is tied to the Milwaukee area's economy and, particularly to its employment situation.

Economic Setting

The Milwaukee area had for the most part fared better than much of the rest of the nation during the recent siege of high unemployment. In 1975, unemployment in Milwaukee averaged 7.4 percent, while the national figure was 8.5 percent. In December of 1976, Milwaukee's unemployment rate was 4.8 percent, well below the national figure of 7.8 percent.

Nevertheless, these rates were substantially higher than those experienced by

the city from 1970-74. And, increasingly, the city's unemployed residents are not as likely to find jobs elsewhere in the country should they choose to migrate.

Skilled factory labor and what it produces make up the most important component of the Milwaukee area economy, but blue collar jobs have declined since World War II in Milwaukee and in the country as a whole. Between 1950 and 1970, employment, by Milwaukee manufacturers expanded more slowly than the national average. However, since 1970, Milwaukee has outdistanced the nation in terms of manufacturing employment growth. In 1976, 32 percent of the work force in Milwaukee was employed by manufacturers, and two-thirds of these were blue collar workers.

Most of the other jobs in the area are dependent upon the economic foundation provided by manufacturing. However, during the deep depression of 1974-75, several large Milwaukee manufacturers reported hundreds of vacancies for skilled workers which they were unable to fill.

Stimulated by that phenomenon, a number of Milwaukee's largest manufacturers commissioned four professors of the University of Wisconsin at Milwaukee[1/] to study this apparent labor supply problem. The experts were enjoined to evaluate the supply of skilled labor in Milwaukee to determine whether a problem existed, and, if so, why and what could be done to resolve it.

The companies interviewed in the study agreed that there appeared to be a serious mismatch between the available positions and the job skills needed to fill the vacancies.

It was found that several companies were unable to obtain an adequate supply of skilled welders and mechanics while industry agreed on the lack of qualified

[1/] Skilled Labor: A Study of the Supply, Education, Problems and Opportunities of Skilled Labor in the Milwaukee Area, April 1977, by Jon Udell, William A. Strang, E. Lauck Parke, University of Wisconsin, Madison, Wisconsin.

applicants, there was no such consensus on exactly what the schools should be offering applicants to prepare them to fill available jobs. Generally, the company representatives suggested that students should be taught the reality of factory life and the work ethic.

Many of the companies interviewed praised Milwaukee Area Technical College's students and programs. In general, MATC programs were considered to be expective. One company suggested that MATC should train more women and minorities for occupations requiring technical skills, and that the MATC supply of machine tools, did not always include the equipment in current use by industry. Vocational training in Milwaukee was generally credited as being of high quality.

The report as the study of Milwaukee's labor supply noted that the shortage of machine operators and welders in 1974, 1975 and 1976 may no longer obtain, probably as a direct result of the growth of MATC enrollments in those skill areas. The study team concluded that the mismatch between available jobs and applicants' skills could best be eased by "close and effective cooperation" between the educational and industrial communities.

Articulation--Internally and Externally

Taking its cue from the results of the University of Wisconsin study and other important indicators, Milwaukee Area Technical College put new emphasis on the development of appropriate channels and mechanisms for articulation--both internally and externally--with the educational community on the one hand and the industrial and civic organizations on the other. The lines are out at all times. Schools, other colleges, business and industry, local government agencies are involved in the network of interaction. Such linkages can be grouped as follows:

1. MATC's internal articulation;
2. MATC's articulation with other educational institutions;
3. MATC's extensive and effective use of advisory committees;

4. MATC's attention to its urban mission, from outreach programs to scholastic efforts;
5. MATC's short-term, supplemental training programs with industry.

More detailed discussions of these examples follow.

Internal Articulation

MATC has organized its work to allow for efficient and economical distribution of educational services throughout the Metropolitan area, and, at the same time, to avoid unnecessary duplication. MATC's use of four separate, integrated campuses -- each with its own specialties -- has obvious advantages for internal articulation, advantages which have led other urban districts to consider and copy the concept. Among the advantages are:

- o Efficient and economical utilization of facilities, resources and personnel;
- o Centralization and reduction of duplication in programs requiring expensive, specialized equipment.
- o Functioning of the district as a unit organized along instructional lines, rather than as four independent campuses.
- o Integration of ethnic and minority groups because of assignment and scheduling of programs throughout the District.
- o Enhanced future site and program flexibility because of decentralized, noncomprehensive locations.

Overall responsibility for operation of the MATC District rests with a seven-member board. The board is composed of two employee representatives, two employer representatives, two representatives of the citizenry at large, and a public school representative. All board members serve six-year terms and are selected by a committee composed of public school district board presidents. The district director is appointed by the board and functions as the chief administrative officer. The district director is responsible for business operations, instruction, budgetary processed, and policies and procedures -- subject to the approval of the board.

The board approves the annual budget and sets the tax rates and levies for the MATC District. As part of the budget review process, the board presents the proposed budget to the public on television channel 10/36, WMVS/WMVT, as well as in a required public hearing. Not until then is the budget officially approved.

As a guide to organization and development, MATC developed a master plan in the early 1970s to assess program and facility needs now and for the future. The plan was prepared by the research staff after a thorough review of present and future employment, education, population and transportation trends and after incorporating comments made at a series of public meetings and hearings.

The MATC board approved the master plan in June, 1973 and the Wisconsin Board of Vocational, Technical and Adult Education followed suit a month later. Since that time, the plan has guided site purchases and construction of two new campuses, and reconstruction and remodeling work at two existing MATC locations.

MATC's four campuses are organized along these lines:

- The downtown Milwaukee campus, whose 1.3 million square feet of floor space covers a four-block area, is more comprehensive than the other three. Although it specializes in health occupations and graphic and applied arts, it also houses classes for adult high school, apprentice and general education programs, and for service occupations.
- The North Campus Center at Mequon, where construction began in spring 1975, emphasizes agribusiness. On its 180-acre site, MATC offers various agriculturally related specialties, including farm equipment repair, horticulture, sod farming and an environmental science program. MATC has its own plant nursery, greenhouse, shops for electricity, drafting and upholstery, and welding. There is enough open field space to construct golf greens.
- South Campus Center in Oak Creek opened in August, 1976; it is the largest of the regional centers. The building area of 260,000 square feet is largely

devoted to District-wide industrial and technical programs. This campus is appropriately located in the center of an industrial park in South Milwaukee, an area noted for its heavy industrial activity. Programs here include auto and truck servicing, air conditioning and refrigeration technology, and various work in the construction, mechanical and electrical trades.

- o West Campus Center in West Allis is housed in a renovated facility which specializes in small engine repair. Several makers of small engines are headquartered in the Milwaukee area. Chief among them is Allis Chalmers, whose home office is located directly across from the campus. A former auto dealership has been remodeled for classes in auto service, small engine repair, and welding. Classrooms and laboratories for science, electronics, marketing and drafting are also included in the facility, which has a total area of 130,000 square feet.

Each of these four facilities also offers a business curriculum. MATC has followed this course because the equipment for business training is not as expensive as for other specialties, and need for business skills is fairly evenly distributed over the entire District.

In all, MATC's own four day centers total about 2 million square feet of space. Many two-year students spend the first year at a satellite location and the second at the downtown campus. Night students also have the option of attending 20 evening centers located in local high school classrooms leased by MATC.

Articulation with Other Educational Institutions

MATC has also initiated substantial articulation with area high schools as well as other postsecondary institutions, mainly in the areas of advanced placement, coordination of institutional programs and continuing education courses. The college and other institutions also share facilities.

When the old Continuation School was phased out and the MATC District was formed

in 1970, articulation with high schools was stepped up. A program of high school contract services was established by the 1969 legislature in place of the Continuation School.

Under this system, MATC furnishes teachers and facilities for public high school students who enroll in specialized classes at MATC by agreement with local school administrations. Students continue at their high schools but receive credit for work successfully completed at MATC. Contracts usually include evaluation of job skills, exploratory work experiences, and diagnostic work-related experiences.

The number of students and participating high schools has increased substantially since the program began. In the first year of operation, 1970-71, MATC served 544 students from six high school districts. Last school year, 945 students from 13 districts particpated.

MATC also has a "Early Leaver" program, which enables students who have completed the 11th grade and have satisfied graduation requirements, to enroll in diploma or associate degree training programs. These students receive credit for work completed satisfactorily at MATC and they graduate with their high school class.

In 1971, MATC made its initial advanced placement agreement with the West Allis-West Milwaukee and Milwaukee Technical High Schools. Under this agreement, their graduates can bypass MATC's basic typing, shorthand, and technical drafting courses through completion of a proficiency test. Opportunities for advanced placement have been worked out for a number of courses, most recently in commercial art. High school graduates can bypass basic commercial art courses by successful completion of a portfolio examination and other competency tests. A pilot articulation project at Oak Creek High School has resulted in a graphics curriculum that soon will enable an Oak Creek graduate to receive credit for up to six courses in the MATC commercial art program.

An MATC instructor and two science teachers at Nathan Hale High School are now developing an advanced placement program for those graduates enrolling in a MATC

program which requires natural science courses. Still another area is computer science, where some high school students are receiving both high school and college credit.

MATC is also working closely with the Milwaukee Public Schools to help develop specialty high schools. Just as MATC's regional campuses specialize in certain occupational training programs, designated Milwaukee schools emphasize health occupations, business occupations, technical and industrial fields, graphic arts, and other career areas. MATC teachers and administrators serve on ten technical advisory committees, which provide advice on curriculum development, career preparation, evaluation of training programs, and equipment needs and acquisition.

MATC also cooperates with other VTAE schools and the University of Wisconsin System on two joint administrative committees. One is the Joint Administrative Committee for Academic Programs. This committee evaluates present and future credit programs that lead to a degree, diploma, or certificate before they are considered by the Wisconsin Board of Regents or the Wisconsin Board of VTAE.

The second is the Joint Administrative Committee on Continuing Education. In order to prevent unnecessary duplication, the panel evaluates current and proposed non-credit programs that provide continuing education units for the non-traditional student.

MATC also has agreements with the University of Wisconsin-Milwaukee and Marquette University which allow either of these institutions to offer courses at MATC regional campus centers as long as the courses do not conflict with those of MATC. UW-M offered an evening course at North Campus Center this semester, for example. A similar arrangement has been made with Nova University, a Florida institution, which conducts classes at the South Campus Center for MATC faculty enrolled in the Nova off-campus doctoral program.

Admissions represents another area of cooperation involving seven other colleges and universities in the Milwaukee area. Representatives of the Admissions Departments

of these institutions formed the Metro Milwaukee Consortium to find ways of communicating with adults who cannot be reached through traditional recruiting methods. As a result of this activity, information on the various learning opportunities offered by the universities and colleges have been compiled and distributed throughout the Milwaukee area.

Advisory Committees

MATC has traditionally prided itself upon its ability to change with the needs of the times and the community it serves. To do this, the institution set out to establish an effective system of communication with business, industry and labor. One of the most effective links in this chain has been that of MATC's extensive use of advisory committees.

Early in its history, MATC influenced the Wisconsin legislature to enact a statute covering the use of occupational advisory committees. That early legislation mandated MATC to establish advisory committees representing every occupation in the district. Equal numbers of employers and employees were to serve on each committee, selected by the district board on the basis of industry recommendations.

The statute sets down a number of duties for these committees: advice and assistance in selecting, purchasing and installing equipment; preparing course materials; developing instructional methods and vocational guidance programs.

Three other types of panels are used by MATC: a blue ribbon advisory committee, ad hoc advisory committees, and apprentice advisory committees.

The blue ribbon committee considers the mission of the college, and in doing so evaluates the complete district operation and all its occupational programs. Leading corporate executives and community leaders drawn from a wide spectrum of society are members.

At least once annually, the blue ribbon committee meets with the District Director to assess MATC's progress in meeting its overall goals and objectives. The panel's yardstick is the District Director's annual report. On the basis of this

report, each member is requested to assess the district's operation and recommend improvements if warranted. The committee offers a collective assessment to the director, who makes it available to the board along with plans to implement recommendations.

Another type of advisory committee helps advise the college on creation of new occupational programs. It is the ad hoc committee. When impetus for a new program comes from either internal or external sources, this committee assists the college in confirming the need (or lack of it) for the new program.

Before such a committee is formed, the district office of instruction conducts a preliminary investigation of program requests. If it finds that the initial suggestion has some merit, the ad hoc committee, composed of employee and employer representatives, is appointed. The ad hoc committee may complete a number of tasks during its existence: identify prospective employers and employees in the particular occupation; review job descriptions; identify existing training programs; and, eventually, assist in development of the program, along with the acquisition of necessary facilities and personnel. When the program is fully implemented, the panel is replaced with an occupational advisory committee.

The fourth kind of advisory panel used at MATC is a creature of the joint apprenticeship training committees, organized by the Wisconsin Department of Industry, Labor and Human Relations, to develop and coordinate apprentice training programs for specific crafts. Committees that provide advisory services to the district regarding instruction for apprentices are part of this advisory structure.

These committees are appointed by the district officer, and operate under the same general guidelines as for the occupational advisory committees. They meet at least once each year. Before a meeting, each committee member reviews the documents pertaining to the particular occupational program and judges the adequacy of the program in meeting current requirements of business and industry. This assessment might cover equipment, specific courses, facilities, instructional materials, student prerequisites or program plans. Members are asked to identify any shortcomings and

suggest improvements. In addition, subcommittees may be organized to perform specific tasks.

A school representative, appointed by the college, serves as liaison between MATC and each advisory committee. Although the committee chairman conducts the meeting, the school representative helps create an agenda, writes the minutes, and prepares reports of progress. He or she is listed in the membership of each committee.

Each of these advisory committees has played a role in furthering MATC's responsiveness to students, industry and the community.

Urban Mission

MATC obviously takes its urban mission seriously. The college employs a broad variety of tools and techniques to make its educational services available to all the people.

One of these tools is that of a willingness to be actively involved in various aspects of community life. Milwaukee Area Technical College has formal and informal relationships with organized labor, the business community, social action agencies, the county executive, the board of supervisors, and the mayor and the city council, among others. Its officials also serve on committees of other educational institutions, and the county and state governments.

As the Department of Labor's approved skill center for Comprehensive Employment and Training Act (CETA) funds, MATC is the coordinator of these Federally-funded programs in its district. CETA offerings run the gamut from education and training to social service and health programs. For some programs, all funds must first come through MATC. In most, MATC has a signoff privilege giving it an overview of programs run with these funds.

In other cases, MATC will turn over programs to credible community-based (delegate) agencies, such as the Urban League or El Centro, the Spanish Center. In these cases, the delegate agencies write proposals, MATC asks approval of the

funding and monitors the projects.

Besides its educational and training programs, MATC sponsors a broad array of community outreach programs -- all for self-enrichment, all free and open to the public. The only charges are for sessions in which materials or meals are involved.

MATC averages about 375 outreach workshops a year which draw some 80,000 people. Attendees range from executives and administrators to homemakers and senior citizens. Many of these are one-day sessions but none is more than three days. Subjects vary from income taxes and investment policy to floral decoration, photography and automobile mechanics.

Most speakers are unpaid volunteers, drawn from the 136 cooperating community organizations. Many meetings are held in hotels and motels or in the district high schools. This outreach effort receives almost no federal aid, and many faculty and employees volunteer.

One of the most successful and largest outreach events is a sales clinic which has been held one evening a year for 33 years. Presidents of companies and consultants donate their time to teach in the session, which has been attended by as many as 1300 people.

Obviously, a superior information and public relations effort is necessary to evoke an enthusiastic response. On example of MATC's innovative methods is a 48-page mailer which goes to each of the 400,000 households in the district twice yearly. This filer contains a register-by-mail form. As a result, 65 percent of MATC's students register by mail for each year's class offerings.

Career planning and counseling has been made more accessible to District residents by the mobile career information center, which was placed in service two years ago. The mobile center is a specially designed van, purchased with a federal grant, that visits high schools, MATC campuses and evening centers, shopping centers, business firms, fairs, and conventions. Career information may be obtained from an

assortment of audiovisual and printed materials or from the experienced counselors who staff the center. Those who visit the mobile center are able to explore careers of their choice as well as educational opportunities offered by MATC and other institutions in Wisconsin.

Last year, MATC ran a special, federally-funded program for the 23,000 Vietnamese who had moved to the Milwaukee area. The newcomers were taught English and technical skills in two programs. Additional numbers of South Vietnamese migrated from the West Coast in 1977, so the programs will be continued with 80 percent federal funding and 20 percent local funding.

One MATC official noted that these community programs serve as a feeder for some of MATC's more conventional educational offerings. Certainly some of the people reached in this way by the college have become students in its Crossover program -- one of MATC's strongest examples of articulation.

Crossover is a special program which helps students improve their basic academic skills before they enter an associate degree program. It combines remedial work with some courses in the desired specialty area. The courses are for credit, but classes are smaller than conventional ones and individualized teaching techniques are used to reinforce and encourage the students. Most enrollees are high school completers, but mature adults may enter if they can pass the high school equivalency tests. Some of these students have eventually entered and completed both Crossover and university programs of study. Over 90 percent complete the program successfully.

Typical first semester curriculum might include: Reading, English 1, Basic Physics 1 and Developmental Mathematics. Second semester classes might be: English 2, Basic Physics 2, Geometry or Developmental Mathematics 2 and Basic Technical Drafting.

To better fulfill its urban mission, MATC also created an active department of urban studies which is free to move in any direction it sees fit, crossing divisional and/or specialty lines to serve the educational needs of the community needs to the community in effective ways.

Short-term, supplemental courses with industry

One of the ways MATC responds to community needs is to sponsor courses (some as short as three to six weeks) at the request of a particular company or industry. These special classes run the gamut from speed-reading for engineers, to supervisory training, and to classes to train workers and supervisors in collective bargaining techniques. Recently, a textile company which needed 700 commercial sewing machine operators in three months trained them at MATC.

Some of these programs are done by contract with industry for newly-hired company trainees. The trainees receive classroom and shop training from college facilities and instructors while receiving on-the-job training by the manufacturer. If the course is closed to the public, the industry underwrites costs. If it is open to the public, the school pays. In recent months, the ratio has been running about 50/50 -- industry and public.

These courses have increased in recent years. The peak came during the January-June, 1977 semester, when 111 of these courses were held by MATC. That compares to 58 the preceding year. Because of the growing demand for these courses, budgets during the last three years have included special allocations for them. At the beginning of that period, $250,000 was allocated annually; the figure is now $500,000. These figures cover only MATC's contribution -- not those of business and industry.

Because these courses are shorter than the conventional programs, a large number of trainees can be serviced. And since these classes can begin at almost any time, they do not require long-term commitments from the college. Another benefit comes from scheduling these classes when facilities would not otherwise be occupied, thus resulting in substantial economies.

Many Levels and Many Directions

Many educators view articulation as merely communication and cooperation between secondary and post-secondary institutions. This study of vocational and technical education intentionally employs a broader definition of articulation -- that of

fitting vocational education into the larger community. To do this successfully, an institution must work on several levels in many directions -- not only with other eudcational institutions, but with local, regional and federal programs, with private industry, with local government, with trade unions -- using all these avenues and more to relate the world of education to the world of work.

MATC has achieved articulation in a wide range of areas. Its willingness to cooperate with other educational institutions in advanced placement, coordination of instructional programs, and shared facilities offers substantial benefits to students and taxpayers of the Milwaukee area.

Milwaukee Area Technical College's carefully planned remodeling and building program outlined previously indicates that the institution is taking constructive steps to improve its physical capabilities in a cost-effective way. Its leasing of space in area high schools for evening classes provides an example of its willingness to share resources and spare taxpayer dollars and student inconvenience.

Certainly, a prime factor in MATC's success is the organizational structure mandated by Wisconsin law. Because of the coordinated approach specified by the state legislature, there are fewer of the duplicative efforts present in other states where technical/vocational institutions exist side by side with community colleges offering similar educational opportunities. MATC has prospered under this approach and has built upon it to construct the integrated, specialty campus method described earlier -- internal articulation which uses available resources more effectively and deliver them more efficiently.

Its strong leadership and effective relationships in the community reflect and reinforce the high degree of articulation which has been attained. MATC obviously regards its outreach programs as both community services and as a source of potential students for its more conventional educational offerings.

In sum, much of the success MATC has achieved may be based on both legislative mandate and effective leadership and staffing. But the wide scope of its articulation efforts indicates a strong and effective commitment to service at all levels.

MAR 2 0 1978

A DESCRIPTION OF COOPERATIVE ARTICULATION BETWEEN THE BOARD OF COOPERATIVE EDUCATIONAL SERVICES (BOCES) HAMILTON-FULTON & MONTGOMERY COUNTIES and the FULTON-MONTGOMERY COMMUNITY COLLEGE (FMCC) JOHNSTOWN, N. Y.

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Background Information

In order to understand the cooperative efforts of the two educational institutions involved in this articulation activities described in later pages, it is necessary to understand the educational structure in New York State which makes the efforts rather unusual, although they are not entirely unique.

Board of Cooperative Educational Services

In 1948, the New York State Legislature authorized the formation of educational service units to serve on an intermediate level between local school districts and the New York State Education Department. At first, the intermediate units, called Boards of Cooperative Educational Service (BOCES), were established to afford the small rural school districts with services that were normally available in urban or large suburban districts—i.e., specialized services in art, music, driver education, services for handicapped children, psychological services, health services, etc. In its initial stages, BOCES membership was limited to rural schools, all city school districts were not allowed to become members of BOCES.

Over a period of time and with the advent of Vocational Education Act monies in 1966, BOCES became the focal point of delivering vocational education to the member school districts

on a comprehensive scale. At the same time, enabling legislation was passed which opened membership in BOCES to all school districts with the exception of the five large cities of New York, Buffalo, Rochester, Yonkers, and New York City. With this enabling legislation, services provided by BOCES to local, parochial, and in certain instances provate schools, were expanded to cover almost any services which might be of use to two or more school districts.

BOCES operates independently of the school districts with its own board of education, but exists only to provide services to the districts which they request. The funding sources for the services come directly from the school districts, the state, or the Federal government. The local school district expenditure is reimbursed the following year through a state aid formula.

In all its activities, the ultimate benefit to be derived is geared to the local school district level and/or its student population.

The BOCES of Hamilton-Fulton and Montgomery Counties was formed initially in 1954 and through retirements and reorganization, the present geographic area of Fulton, Montgomery and the lower half of Hamilton County was formed in April 1966. The current membership is 13 rural school districts and two small city school districts.

The district superintendent of schools, who is the field representative of the Commissioner of Education of New York State and an employee of the State Education Department, by law is the chief executive officer of the BOCES. There are currently 44 BOCES areas in the State of New York ranging in size from 10,000 to over 100,000 pupils served.

Community Colleges

A community college in New York State is a post-secondary institution and is part of the State University system in New York State. Community colleges are organized on a single county or multi-county basis, with the county boards of supervisors forming a contract with the State to sponsor the establishment of a two-year college. Upon approval of the formation, the college authorities establish the purposes and programs it will offer. The funding for the college is divided on a one-third basis; one-third coming from county governments, one-third from the State, and one-third coming from student tuitions.

Fulton-Montgomery was established in 1963 under the joint sponsorship of the Fulton and Montgomery Counties governments. Its initial purpose was to serve as a two-year liberal arts college. During the late 60's and into the early 70's the college began to experience declining enrollments. In a spirit of cooperation, and with strong backing from the local school districts, the college was encouraged to expand its offerings to include programs in technical education and thereby tap a

student resource that was leaving our area to attend colleges which offered technical programs.

Beginning with the 1971-1972 academic year, BOCES and FMCC began to form a joint program of mutual support, concentrating on the development of strong vocational-technical cooperative programs.

The realization that foolish pride, provincialism, over protecting past performance, and rising costs were artificial, man-made barriers to progress, joint ventures became a natural way to conduct business; the governing bodies, administrative staffs, and faculties of both educational institutions embarked on an adventure of cooperation--now called articulation.

Although our beginnings were small, the mutual respect, trust and cooperation have continued to grow and are still continuing to expand.

Description of Activities

1964 - Cooperative Data Processing Program

BOCES began a small data processing program in September 1963 as part of its business curriculum. The program was equipped with funds obtained under the VEA program. Due to low enrollment at the secondary level, BOCES agreed to allow FMCC to use the equipment and facilities to automate their student records and business operations.

Over a period of time FMCC obtained a computer which was placed in the BOCES facility and was supported by the BOCES equipment. Thus began the first cooperative venture of BOCES and FMCC sharing joint facilities and equipment. For a nominal rental fee to cover the cost of heat, lights, and custodial fees, FMCC attained a fully operative data processing center and BOCES gained a fully equipped educational facility which was used to train secondary students in data processing operations.

This program continued on a cooperative basis until 1975 when BOCES consolidated data processing training with its office machines program. FMCC continued to use the facility for college purposes on a full-time basis until May 1977 when its two county sponsors took over data processing as a governmental function.

1967 - Enrichment Center

In February 1967, a committee composed of school district representatives prepared an ESEA Title 3 grant for the purpose of developing curricular materials in local history and non-western cultures. The grant was approved beginning July 1, 1967 and at the same time FMCC had completed construction of its new campus with a complete professional library, audio-visual production, as well as several excellent professors interested in the two areas of the grant. The project was named The Fulton-Montgomery Enrichment Center.

The school districts requested that FMCC provide facilities to house the project, conduct the curriculum writing, and use of the college library and other resources. The college trustees, administration, and faculty unanimously endorsed the proposal and the project began to function September 1, 1967. In lieu of any monetary exchange to the college, the college simply requested that their faculty have access to the research and the products developed.

The Title 3 project continued with Federal funding until 1970. At this time, the three year life of the project ended. However, due to the success of the project and the excellent cooperation of the college, the school districts requested BOCES to assume operation of the Enrichment Center with local funding,

expand the purpose of the project and become the in-service training unit for the school districts. FMCC continued to provide facilities and fully participated in the program development.

In 1975, the Enrichment Center expanded once again to include an educational communications center and a special education instructional materials unit which provides assistance to teachers and parents dealing with handicapped children. Again, the college provided expanded facilities and shared in the resources acquired by funding from the local districts. As an added plus, the college provided access to college resources to local high school classes and students to do research and research papers and provided college teachers as resource persons for interested high school groups.

1970 - Graduate Study Program

Our particular area of New York State did not and still does not have an accredited graduate program located within our geographic boundaries. Yet, there is a population of elementary and secondary teachers who are required to complete graduate courses in order to maintain teacher certification and many of the college faculty wanted to complete further graduate study.

In April 1970, the State Education Department offered a voluntary program to the district superintendents to become regional certification agents to assist in easing the 18 month backlog the State was experiencing. Our BOCES became involved as a regional certification office and in cooperation with FMCC, we began to request graduate schools to look into providing off-campus graduate courses at the FMCC campus with an emphasis on educational and academic base which would lead to certification. In September 1970, one State University College agreed to provide two graduate courses; the enrollment of these two courses exceeded 235 persons. Within a matter of weeks, this college brought in five additional courses and the total enrollment exceeded 400 persons.

This program still continues; however, there are now five graduate schools offering courses on a year round basis, and

beginning in 1972, it was possible for interested persons to complete advanced degrees at the FMCC campus from two of the graduate schools. The range of course offerings covers elementary, secondary academic and special subject areas, guidance, administration, and post-secondary education.

1972 - Recognition of BOCES Programs

During the 1971-1972 school year, it became apparent that the BOCES program in data processing and advanced business machines were similar in scope to several of the business courses required by FMCC for completion of the associate degree in business. It also appeared that more high school students might be interested in attending a post-secondary institution if they could obtain some collegiate credit for the work completed at BOCES during their high school years.

An open invitation was made to the FMCC administration and business education faculty to discuss these possibilities with the BOCES staff. As a result of this joint meeting, the BOCES agreed to have the college faculty review and evaluate the BOCES curriculum requirements and faculty to determine whether the training was equivalent to college courses.

In the second semester of the 1971-1972 academic year, the college committee unanimously recommended that any student completing the one year data processing program or business machines program be granted six semester hours of college credit if they enrolled within one year of successful completion of the BOCES program and carried the recommendation of the BOCES instructor.

For the first time, high school students were being given advanced placement credit for regular high school courses.

1973 - 1978 Technical Programs

As mentioned previously, FMCC began offering technical programs during the 1972-1973 academic year. Eventually the areas offered were:

auto mechanics, building trades, food trades, graphic arts, natural resources conservation and electricity.

BOCES offered all the technical assistance possible to FMCC in helping them set up their technical programs and to obtain the necessary faculty. As a further effort, BOCES trade and technical shops were offered to the college for their use.

As a result of these efforts and expanded offering a formal agreement was made in 1974 between BOCES and FMCC which allowed the college to use BOCES facilities daily after the regular secondary day program was completed and prior to the adult evening programs.

The following is a general description of that agreement:

SUBJECT: The Basis for an Agreement between BOCES and the Board of Trustees of Fulton-Montgomery Community College concerning use of BOCES facilities for Fulton-Montgomery Community College certificate and technology programs.

1. Utilization and access of facilities

FMCC will have use of the two automotive shops, building trades shop, conservation shop and graphic arts shop for 3 hours each day, Monday through Friday during the school year. The three-hour utilization period will commence at the end of the BOCES school day. Additional evening hours, Saturday

time and vacation periods will be made available through the coordination of both agencies.

2. Use of instructors

Instructors teaching college courses will be on college payroll. Use of instructors on the BOCES staff in teaching college courses will be coordinated between both agencies. In the case of a non-BOCES teacher instructing a college course, the BOCES must approve of this instructor prior to the use of the shop.

3. Service costs

Service costs will be based upon a formula already agreed upon, using the square footage times rate per square foot.

4. Service charges

Purchase of equipment, replacement costs of equipment, and supplies will be shared by both agencies.

5. This agreement will be for a five-year period. This agreement should be reviewed, renewed, and extended annually to maintain the five-year projection.

Prior to this agreement, BOCES and the college shared in the operation of the Data Processing program. The program was housed at the BOCES. In addition to space, the BOCES provided an air conditioning system and supplemental equipment such as key punch machines. The college furnished the computer. FMCC used the facility both day and evening with the exception of 12:00-2:30 p.m. which was reserved for BOCES class use.

1975 - Liaison Committee

At the request of the District Superintendent of BOCES and the President of FMCC a permanent liaison committee was established to handle the articulation of occupational and technical programs in order to provide a sequential and continuous vehicle which could handle issues and problems currently rather than react on a hit-or-miss basis in a crisis confrontation.

The permanent committee consists of: the Comptroller, the Dean of Students, and the Dean of Career Education from FMCC and the Director of Occupational Education and Assistant Superintendent for BOCES Programs. This committee meets on a regular monthly basis, alternating meetings between the two institutions. Minutes of all meetings are kept and filed for future reference.

The topics covered by the liaison committee cover a wide range of activities: budgeting for programs, mutual enrollments, selection of teaching staff, determining formula for facilities usage charge, advanced placement program credits, planning for new programs and equipment, etc.

Should an urgent matter arise, the committee is flexible in meeting between regular monthly meetings usually by a telephone call from a member of the committee. Since our two institutions

are located less than two miles from each other, travel time is at a minimum.

Once decisions are reached on matters of policy, the respective members present the policy in writing to the chief executive officer of their institution. If formal action is required by the boards of trustees, the executive officer obtains the necessary approval.

The use of the permanent liaison committee tends to reduce problems and crisis situations are kept at a very low level. The members of the committee are on the middle management level and carry both the authority and responsibility to settle the issues involved. The open lines of communication which exist are a must in maintaining the cooperative efforts of both institutions.

1977 - Joint Advisory Committees

Both the college and BOCES had established community based craft advisory committees for each of its vocational-technical programs and a general advisory committee for the overall programs.

After operating on a separate and distinct basis, since 1964 and 1973 respectively, the BOCES-FMCC liaison committee suggested we look at the possibility of combining craft committees where appropriate and as a further move look toward a combined general advisory committee which would have the general role of overseeing the complete offerings of all vocational-technical programs in our geographic area.

In May 1977 both institutions agreed to this proposal on a one year basis for the 1977-1978 academic school year and at the present time the appropriate committees are functioning.

In a relatively small rural area such as ours, this cooperative makes a good deal of sense from two points of view: eligible membership for the committees is limited and more efficient use is made of the member's time and almost 100% attendance is maintained when people know they will have to attend only one meeting rather than two.

Adult Education - Apprentice Training Programs

Both BOCES and FMCC operate adult evening classes in the vocational-technical areas. BOCES operates the shop, hands-on operation aspect and FMCC will generally run the classroom theory parts of the programs.

BOCES was designated as the recognized training institution to provide the 144 hour program of related instruction required for apprentices in various trade and technical areas. We are also responsible for certifying that each apprentice has completed the required instruction. If BOCES is unable to provide the required instruction, the apprentice is referred to FMCC for possible enrollment in their program.

It is now possible, with the enthusiastic support of the trade union involved, for apprentices to complete their 144 hours of instruction and have the appropriate credit transferred to FMCC and receive appropriate semester hours toward the completion of an associate degree program.

Apprentice programs are currently operated in electricity, automotive mechanics, automotive body and fender repair, welding, graphic arts and building trades.

Future and Summary

Although the BOCES and FMCC are the vehicles being used for the articulation of vocational-technical programs, the ultimate receivers of the benefits are the school districts, the students, and the community at large.

It makes little sense for public institutions to openly compete for the same clientele, the same tuition charge, and the same tax dollar. However, it does make sense to give students the benefit of training they have received at one institution and have appropriate credits applied to the other institution. Any educational institution believing that all or only significant learning takes place at their institution is operating with its head in the sand and will soon see that students are willing to go elsewhere when their accomplishments may be recognized as having sufficient merit to warrant allowance toward college credits.

The open lines of communication between our two institutions are healthy, alive, and growing. It seems almost ridiculous that we didn't operate on a cooperative, articulated base right from the start; but, we are human and fortunately we have learned by some of our past mistakes.

Any steps taken by our institutions to work together cooperatively can easily be transferred to other institutions

in any part of the United States. All it takes is an open mind and a willingness to recognize that someone may be doing something as well as or better than we are and we should be working with them for the benefit of the communities we serve.

We are currently looking toward an articulated program in nursing education. BOCES operates an excellent licensed practical nurse program for high school students and qualified adults. FMCC offers an associate degree in a registered nurse program. Under current operations, there is no formally agreed upon procedure whereby a graduate of the BOCES LPN program can enroll at FMCC and receive partial credit for the study completed at the licensed practical nurse level. Although FMCC does offer credit by examination for certain phases of the nursing program, there is as yet no uniformity in the procedures. Within the next two years we sincerely hope that a qualified LPN can transfer to FMCC and with one additional year of collegiate level study obtain the associate degree and licensure as a registered nurse.

As new programs are introduced at the educational institutions, I am sure a cooperative spirit will continue to ensure their success. To be successful, both institutions must continue to derive some benefit from the cooperative efforts. As in the past, our efforts will not be limited to the vocational-technical area, but will continue to include instructional resources, graduate education programs, and any other programs which may involve our mutual support and cooperation.

AACJC/AVA
Joint Study

Margot Sanders Eddy
November 5, 1977

Bellevue Community College:

A Suburban Curriculum

Articulation Model

Postsecondary education in suburbia faces challenges today unlike those of earlier decades. On the one hand, it must accommodate a natural (and desirable) diversity: diversity of interests of student capabilities, and of community priorities. On the other hand, postsecondary schools can be a singular community asset. The accessibility of community colleges, their low cost and low risk environment, and their tolerance for the non-traditional student make them unique resources. At a time when employers are pressed by the increasing need for specialized workers, and employees are pressed by competition for jobs, these schools may be one of the best means for balancing needs at low cost to the community.

Yet, postsecondary education faces a third and vital challenge. As schools grow to fulfill community needs, they run the risk of growing either too fast or in the wrong direction, duplicating services already available or not providing others in short supply. In most recent times, they may find themselves unable to grow at all, because of resources tied up in current programs. Not infrequently, the competition that arises among postsecondary schools as a result not only confuses the public but also depletes valued and already limited resources in the form of tax dollars, facilities, enrollments, or even simply the effectiveness of the education offered. A community college in the Pacific Northwest recently joined with others of its community's vocational educators to turn these challenges to their mutual advantage. In doing so they have shown that the whole may--after all--be greater than the sum of its parts.

The metropolitan area of Washington's largest city, Seattle, has for years been confronted with the dual problem of limited fiscal resources and an interest in modest growth. Despite a setback in the early 1970's because of Boeing's suddenly reduced production when SST projects were canceled, the larger community's development has been quiet but substantial. Today about 65 percent of Washington's population lives in the Puget Sound area. Due in part to the Boeing predicament, the area has successfully diversified its economic interests, and the community rallied to regain its economic stability. Neighborliness, born of necessity, is a tradition well established in the Northwest.

The population's interest in postsecondary education is readily apparent: In King County alone there are two public vocational-technical institutes, five community colleges comprising seven campuses, and the state's most prestigious university. In addition, a number of fine private schools enhance the educational landscape. (That education in Washington is widely spread and of high quality is verified by an armed forces seven-year study of those applicants failing to qualify for the service, the lowest percentage of failures--six percent as compared to percentages in the fifties--came from Washington State.) The northeast corner of King County, across Lake Washington and east of the city, is served by ten public school districts, the county's two vocational-technical institutes, and three community colleges. Of these institutions, Bellevue Community College has provided both leadership and support energies for a comprehensive local effort to articulate vocational education.

Bellevue Community College, just over a decade old, has its origin in the extended high school. It soon became an independent district, and now occupies a lush 96-acre campus just minutes from Seattle. Its student headcount has topped 7,000. Its excellent facilities include a celebrated Library Media Center that boasts a graphic arts laboratory, extensive audiovisual aids, photographic darkrooms, a television studio for the production of videotaped instruction for cable television, and dial-access information-retrieval system that provides continuous access to recorded lessons, stereo music, and other audio and video information by means of either headphones and screens in Center carrels or home telephones throughout the state. The college is in the state's forefront of educational technology.

The community in which the school is situated, although a close suburb of Seattle, is buffered from the city by a long freshwater lake. A large portion of the town of Bellevue's border is lakefront. The town's median family income last year approached $19,000 and 47 percent of its inhabitants have occupations that are professional, highly technical, managerial, or administrative in nature. Bellevue has traditionally been supportive of educational programs and of energetic educational leadership. Washington's public elementary and secondary schools were until very recently extremely dependent on local bond issues for funding; in a state in which local failure to support bond issues has been a common (though lamented) phenomenon, Bellevue has lost only one bond issue election in the last ten years--and in that particular case a reelection turned the tide in favor of the schools.

So it is in keeping with both the Northwest tradition of neighborly cooperation and the local interest in public education that Bellevue Community College should take part in developing a successful curriculum articulation effort. Under the direction of Allen Suver, the Associate Dean of Instruction for Occupational and Special Programs at the college, a program has evolved that combines both formal and informal cooperation among all the public institutions in this corner of the county offering vocational education programs. This adds up to ten public school districts (Bellevue, Edmonds, Issaquah, Lake Washington, Lower Snoqualmie, Mercer Island, Northshore, Renton, Shoreline, and Snoqualmie Valley Districts), two vocational-technical institutes (Renton and Lake Washington), and three community colleges (Bellevue, Edmonds, and Shoreline Community Colleges).

The project, although it's become a model for other regions to emulate, has a relatively short history. It has its germs in three reinforcing policy decisions at three administrative levels: the state's prescription for the functions of various levels of public education, the statewide coordination efforts of local vocational education administrators, and regional interest in using existing resources more effectively. The state government's more or less indirect role has been to define the vocational functions of its schools in a rational manner. High schools offer traditionally diverse programs, both academic and vocational. Vocational-technical institutes, however, have a more closely delimited set of purposes. Their programs are structured

strictly along occupational lines, and the advisory boards provide planning that assures the offerings will be functional and not comprehensive in nature. These schools are thus intended to provide the link between the common schools and occupations requiring short-term technical training. Community colleges, on the other hand, have the dual requirement of being comprehensive but also being responsive to special community needs. In 1971, for example, 37 percent of the state's community college offerings were vocational, while the rest were either academic (for transfer) or adult education. The state provides an unusual element of flexibility within these strictures, however: there are no areas residence requirements, aside from state residence, for admission to vocational-technical institutes and community colleges. If a student wishes to do so, he may take advantage of course offerings throughout the state without paying extra fees. He can consult a course directory that the state publishes regularly for this purpose.

An organization of local vocational educators in the state (the Washington Council of Local Administrators of Vocational Education, or WCLA) has provided leadership that is more active than prescriptive. With the idea in mind of promoting articulation efforts and ideasharing statewide, WCLA convened the Sun Mountain conference in May 1975. One specific purpose of that meeting was to secure regional and personal commitment to these goals on the part of local administrators. This group felt that "grass roots" efforts, those involving the commitment and initiative of

individuals at the local level was bound to be more productive in the long run than programs imposed by state mandate and regulated from the capital. One early result of the conference was the implementation of its recommendations by three of the state's regions.

Among the regions to act on the impetus of the Sun Mountain Conference was the group of school districts, vocational-technical institutes, and community colleges serving northeast King County, the Northeast Vocational Advisory Council (NEVAC). In doing so, NEVAC was not only pursing WCLA interests but also redesigning an earlier articulation study by a somewhat smaller consortium, and as such was building on a base of community effort. The interesting process at work here was a state level priority filtering down to the "grass roots" where it was accepted and acted upon.

The NEVAC model took form as the result of a preliminary study, which had four phases. First, an enrollment study was undertaken. It surveyed the area's vocational course offerings to identify a "common system of comparing course effort" and to draw program profiles for each school. The survey was extensive, and the results provided a statistical picture of the enrollment in specific occupational areas in each school district and postsecondary institution. Additionally, it included recommendations for interpreting vocational enrollments according to the particular requirements of occupational groups. These recommendations attempt to deal with such matters as whether the amount of

instruction is best measured by class time or by other means such as teacher preparation time and outside learning time; whether enrollments in the three levels represent equal proportions of state enrollment; and whether the three educational levels represent a single population, or several populations, each with a different level of aspiration. All of these questions suggest a more realistic approach to the schools' different needs than simple quantification will allow. After development of measures for full time equivalent vocational enrollments in courses in each field and school, it was determined that the relevant enrollments to work from for articulation purposes were approximately 5,800 students in the high schools, 7,900 in the vocational-technical schools, and 12,200 in the community colleges.

The second phase of the preliminary study was to focus the model on three curricular areas. The NEVAC membership identified the areas of business and office education, child development, and health occupations as the subject areas on which to concentrate their attention. In the third and fourth phases, 24 instructors from these disciplines in the schools involved gathered in a series of half-day workshops on Saturdays in order to accomplish two consecutive tasks: to agree on the parameters for the work ahead of them, and then to develop sets of materials to take back to their schools.

During the first several Saturday workshops (the third phase) the teachers specified the career clusters that make up their curriculum areas. Within those clusters, then, they decided to

develop job ladders and competency statements for each rung of each ladder. As the workshops progressed, it seemed more productive to keep the specific careers to just a few, so the final materials development was limited to secretarial and clerical careers, nursing and health support careers, and a unified set of materials for child development careers.

During the fourth phase, the later workshops in the series, the materials that had heretofore been in the planning stage took form. The process that evolved included not only designing career ladders with sample job titles and probable annual salaries spelled out, but also the formulation of objective statements of expectations and a competency checklist for each career step. For the latter purpose a matrix was designed for all the career steps, clearly outlining the local schools offering the necessary training, the required credentials (including state exams, licenses, academic or professional degrees and the like), the form of training, a list of sample employers, the competencies and expectations belonging to various positions, the teaching--if any--that the career person will have to do, the leadership skill that correlates with job responsibilities, and finally, the individual's "team role" or place among fellow workers. In fact, these materials are organized in such a way that they may be triply useful. The progression of competencies allows for "mapping" of core courses so that it can be determined how well programs are outlined to meet actual career requirements. This same progression provides the teachers with planning aids for their own courses, and an understanding of the way each course fits into the program's purpose. But in addition to

these curriculur uses, the materials can serve as counseling aids, offering students a realistic picture of the career fields' advantages, requirements, potential for individual advancement, and occasional disadvantages. The materials alone offer several kinds of information that may otherwise not be available to the students, and one or two kinds that may not even be well known to all instructors. So the products of the workshop series will be an asset to the programs in more than one way.

The workshops afforded two additional bonuses. First, most of the teacher-participants expressed interest in--and were accommodated by--receiving university credit for their productivity. In order to accomplish this, they were assigned the extra task of identifying assessment techniques that could be used to assure student attainment of competencies. This included writing sample test materials that fit into the overall curriculum plan. Second, at the same time that they organized and carried out their curriculum work, the participants were able to develop personal contacts in the vocational education community and to become aware of the scope of offerings in the region. This particular feature of the workshops was a kind of opoortunity that is often underestimated: the chance for relatively informal communication not only within a career or industrial area, but also among colleagues in the educational community. The instructors later reported that they especially valued their new perspective of the different educational levels in the consortium.

In the first year, then, the project accomplished several things. The most immediately apparent is the set of curriculum

and counseling materials that the instructors themselves prepared and took back to their schools. In addition, the formal and informal cooperation that had existed before was strengthened and augmented. For example, although no exchange of teachers takes place, the schools do cooperate in inservice training for their instructors, and one school will occasionally invite other schools' staff to visit and familiarize themselves with new equipment and materials. Labor organizations and local business and industry groups contribute by providing opportunities for students to engage in cooperative work-study programs.

These articulation arrangements have encouraged and extended communication among vocational educators within the regional system. The local program directors meet every two weeks to exchange ideas and recommendations, and WCLA members at all levels throughout the state gather five times a year. The local educators meet formally and informally at each educational level, and idea exchanges are facilitated by the personal contacts made during the workshops. To date, however, the advisory boards are separate for each institution and each educational level, and agreement has not been reached about articulation at the board level.

Finally, the first year resulted in a mutual agreement to continue the curriculum workshops for another academic year. Before finishing the first year, the NEVAC administrators had developed detailed plans and a timeline, and expanded the program to bring professionals from the occupational fields into the curriculum planning process. They also plan to develop criteria for advanced

placement in vocational courses. During the second year the workshop participants will continue the work by validating and further developing the curriculum materials in their own schools. All of these are important signs of the project's continuity and evidence that it is meeting a need among these educators.

A setback occurred when funds were not made available for extending the articulation project during the second year. Planning continued, however, and some funds were eventually budgeted. They are less substantial than for the first year, but will allow the project to continue. There are now plans to develop career ladders for data processing and accounting, as well as to validate the first set of ladders. So despite problems in funding, which we are all familar with, the NEVAC group continues to work together.

Throughout the evolution of the NEVAC model certain unique processes and attitudes have been at work--characteristics that, alone or in combination, have worked in favor of the program's goals. First, local initiative was highly valued from the outset. From the Sun Mountain Conference to the completion of the model's first year, it was the local administrators and practitioners who made the program work. It is significant that the career charts the teachers created highlight the team role in each profession, since this approach is consistent with the structure of the program itself. A second important attitude was that at all stages of the project there was a focus on process as well as product. This is exemplified by the interest in personal commitment, a respect

for the uniqueness and the needs of each school level and each vocational area, a regard for the participants' wish for university credit, and the underlying principle that the community's vocational needs and resource limitations are common ground for educators from a variety of institutions to work together. The fact that interest was sufficient to plan a second year (a fact that the first year's report proudly announces) and to build improvements into its structure and content is evidence that the approach worked.

In addition to the program model itself, Allen Suver, in his leadership role in undertaking the NEVAC project, and Bellevue Community College, in its support of the endeavor, give us a model for both approach and outcomes. The indications are good that Bellevue Community College's energetic leadership will continue. Dr. Thomas O'Connell, the community college's new president is an experienced hand at community college leadership. He supports the multipurpose college concept that stresses meeting the multiple needs of the community. In its brief history, Bellevue Community College already established a tradition of educational quality, and it is to be hoped that such forward-looking programs as the NEVAC articulation model will be encouraged and continued in King County and in suburban communities throughout the country.